CLAIMS

We claim:

1. A method of routing a group of nets in a region, the method comprising:

a) identifying a first route for a first net;

b) determining whether embedding the first route in the region will make a set of unrouted nets in the region unroutable;

c) when embedding the first route will make the set of unrouted nets unroutable, identifying a second route for the first net.

2. The method of claim 1, wherein determining whether the embedding of the first route in the region will make the set of unrouted nets in the region unroutable comprises determining whether the embedding will increase the routing costs of the set of unrouted nets beyond an acceptable cost threshold.

3. The method of claim 1 further comprising:

a) embedding the first route in the region,

b) removing the first route from the region when the embedding the first route makes the set of unrouted nets unroutable.

4. The method of claim 3, wherein when the embedding the first route makes the set of unrouted nets unroutable, embedding the second route in the region.

5. The method of claim 1, wherein when the embedding the first route will not make the set of unrouted nets unroutable, embedding the first route in the region.

6. The method of claim 5 further comprising:

a) identifying a third route for a second net;

b) determining whether embedding the first and third routes in the region will make a set of unrouted nets in the region unroutable;

c) when embedding the first and second routes will make the set of unrouted nets unroutable, identifying a fourth route for the second net.

7. The method of claim 6, wherein when the embedding the third route makes the set of unrouted nets unroutable, embedding the second route in the region.

8. The method of claim 6, wherein when the embedding the first route will not make the set of unrouted nets unroutable, embedding the first route in the region.

9. A method of routing a group of nets within a region, the method comprising:

a) identifying a route for a net;

b) determining whether to embed the identified route based on the estimated routing cost of a set of unrouted nets in the region when the region contains the identified routed.

10. A computer program embedded in a computer readable medium, the computer program for routing a group of nets in a region, the computer program comprising instructions for:

a) identifying a first route for a first net;

b) determining whether embedding the first route in the region will make a set of unrouted nets in the region unroutable;

c) when embedding the first route will make the set of unrouted nets unroutable, identifying a second route for the first net.

11. The computer program of claim 10, wherein the instructions for determining whether the embedding of the first route in the region will make the set of unrouted nets in the region unroutable comprises instructions for determining whether the embedding will increase the routing costs of the set of unrouted nets beyond an acceptable cost threshold.

12. The computer program of claim 10 further comprising instructions for:

a) embedding the first route in the region,

b) removing the first route from the region when the embedding the first route makes the set of unrouted nets unroutable.

13. The computer program of claim 12 further comprising instructions for embedding the second route in the region when embedding the first route makes the set of unrouted nets unroutable.

14. The computer program of claim 10 further comprising instructions for embedding the first route in the region when the embedding the first route will not make the set of unrouted nets unroutable.

15. The computer program of claim 14 further comprising instructions for:

a) identifying a third route for a second net;

b) determining whether embedding the first and third routes in the region will make a set of unrouted nets in the region unroutable;

c) identifying a fourth route for the second net when embedding the first and second routes will make the set of unrouted nets unroutable.

16. The computer program of claim 15 further comprising instructions for embedding the second route in the region when the embedding the third route makes the set of unrouted nets unroutable.

17. The computer program of claim 15 further comprising instructions for embedding the first route in the region when the embedding the first route will not make the set of unrouted nets unroutable.